

## Anti-Human CD117 (c-Kit) Antibody, Clone 104D2, APC



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## Antibodies

Mouse monoclonal IgG1 antibody  
against human, cynomolgus, cow  
CD117 (c-Kit), APC-conjugated

Catalog #60087AZ  
#60087AZ.1

100 Tests 5 µL/test  
25 Tests 5 µL/test

## Product Description

The 104D2 antibody reacts with CD117 (c-Kit), an ~145 kDa type 1 transmembrane receptor for c-Kit ligand (stem cell factor/steel factor) that is broadly expressed on hematopoietic stem cells in bone marrow, including pluripotent and erythroid progenitor cells and B and T lymphocyte precursors, as well as on mast cells and melanocytes. CD117 is expressed on ~1 - 4% of bone marrow cells, the majority of which (~50 - 70%) co-express CD34 and comprise progenitor cells and their precursors. CD117 belongs to the tyrosine kinase receptor family and possesses five immunoglobulin-like C2-type domains and a cytoplasmic protein kinase domain. Binding of c-Kit ligand to CD117 induces dimerization and autophosphorylation, which activates several intracellular signaling pathways critical for the proliferation and differentiation of hematopoietic stem cells. Signaling by CD117 is modulated by phosphatases and by rapid endocytosis and degradation of the receptor. Binding of the 104D2 antibody does not block binding of c-Kit ligand or antibody clone SR1.

Target Antigen Name:	CD117 (c-Kit)
Alternative Names:	c-KIT, cKIT, stem cell factor receptor (SCFR)
Gene ID:	3815
Species Reactivity:	Human, Cynomolgus, Cow
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	104D2
Isotype:	IgG1, kappa
Immunogen:	MOLM-1 megakaryocytic cell line
Conjugate:	APC

## Applications

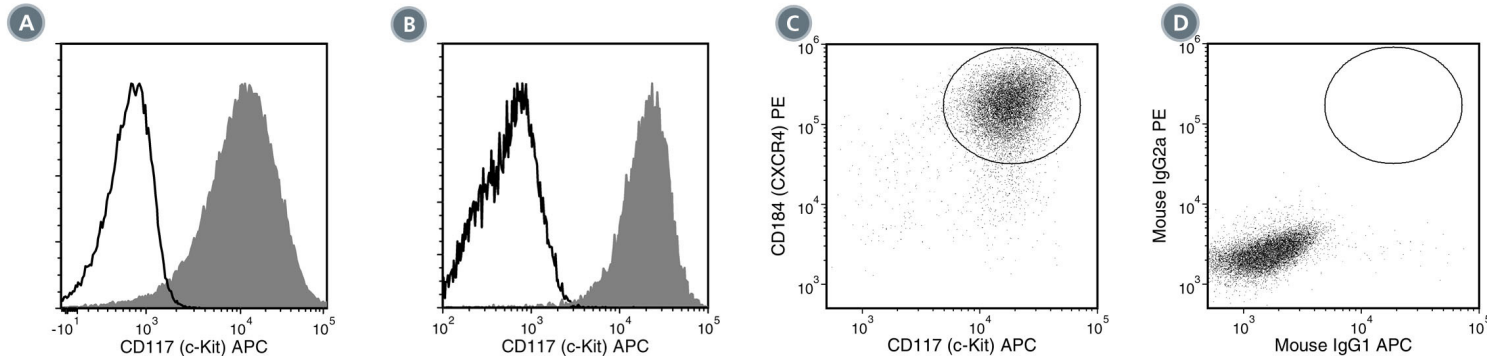
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells cultured with STEMdiff™ Definitive Endoderm Kit (Catalog #05110).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

## Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin
Purification:	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions. The solution is free of unconjugated APC and unconjugated antibody.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is 5 µL per 1 x 10 <sup>6</sup> cells in 100 µL volume or per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application.

## Data



(A) Flow cytometry analysis of human erythroleukemia (HEL) cells labeled with Anti-Human CD117 (c-Kit) Antibody, Clone 104D2, APC (filled histogram) or a mouse IgG1, kappa APC isotype control antibody (solid line histogram).

(B) Flow cytometry analysis of human induced pluripotent stem (iPS) cells labeled with Anti-Human CD117 (c-Kit) Antibody, Clone 104D2, APC (filled histogram) or a mouse IgG1, kappa APC isotype control antibody (solid line histogram).

(C) Flow cytometry analysis of human embryonic stem (ES) cells following differentiation to definitive endoderm using the STEMdiff™ Definitive Endoderm Kit. Cells were labeled with Anti-Human CD117 (c-Kit) Antibody, Clone 104D2, APC and Anti-Human CD184 (CXCR4) Antibody, Clone 12G5, PE (Catalog #60089PE). The emergence of definitive endoderm can be monitored by co-expression of CD117 and CD184.

(D) Flow cytometry analysis of human ES cells following differentiation to definitive endoderm using the STEMdiff™ Definitive Endoderm Kit. Cells were labeled with a mouse IgG1, kappa APC isotype control antibody and Mouse IgG2a, kappa Isotype Control Antibody, Clone MOPC-173, PE (Catalog #60071PE).

## Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

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